

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application.

Claims 1, 3-5, 8, 16-20 are now present in this application. Claim 1 is independent. Amendments have been made to the Abstract of the Disclosure and specification. Claims 2, 6, 7 and 9-15 have been canceled, claims 17-20 have been added, and claims 1, 5, 8 and 16 have been amended. No new matter is involved. The amendments to the claims and the new claims are fully supported by Applicants' originally filed disclosure, including pages 5-9 and Figs. 2-4.

Reconsideration of this application, as amended, is respectfully requested.

Priority Under 35 U.S.C. § 119

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. § 119, and receipt of the certified priority document.

Information Disclosure Citation

Applicants thank the Examiner for considering the references supplied with the three Information Disclosure Statements filed on June 3, 2004, June 30, 2005, and August 11, 2006, and for providing Applicants with initialed copies of the PTO-1449 form and the PTO/SB/08 forms filed therewith.

Objection to the Abstract of the Disclosure

The Examiner has objected to the Abstract of the Disclosure because of the use of an implied phrase. In order to overcome this objection, Applicants have amended the Abstract of the Disclosure to delete the objected-to implied phrase. Accordingly, reconsideration and withdrawal of this objection are respectfully requested.

Objection to the Drawing

The Examiner has objected to the drawing for failure to comply with 37 CFR § 1.84(p)(5) in that the points a, b and c, shown in Fig. 4 are not mentioned in the specification. In order to overcome this objection, Applicants have amended the specification in order to correct the deficiencies pointed out by the Examiner, without entering any new matter.

Reconsideration and withdrawal of this objection are respectfully requested.

Claim Objections

The Examiner has objected to claims 13 and 16 because of lack of proper antecedent basis for certain claim terms. This rejection is moot with respect to claim 13, which has been canceled, and claim 16, as amended, provides proper antecedent basis for the objected-to terminology.

Reconsideration and withdrawal of this objection are respectfully requested.

Rejection Under 35 U.S.C. § 112, 2nd Paragraph

Claims 5-7, 9-11, 14 and 16 stand rejected under 35 U.S.C. § 112, 2nd Paragraph. This rejection is respectfully traversed. This rejection is moot with respect to claims 6, 7, 9-11 and 14, which have been canceled.

The Examiner has set forth certain instances wherein the claim language lacks antecedent basis or is not clearly understood, or is otherwise informal

Claims 1 and 5, as amended, provide proper antecedent basis for a motor having poles and a method of changing a number of poles of the motor. Claim 16 has been amended to recite controlling the phase of a motor voltage phase control circuit, which should clarify the meaning of the terms said to be unclear in meaning. Applicants respectfully submit that claims 5 and 16, as amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

The test for compliance with the second paragraph of 35 U.S.C. § 112, as stated in Miles Lab., Inc. v. Shandon, Inc., 997 F.2d 870, 875, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993), cert. denied, 510 U.S. 1100 (1994) is whether one skilled in the art would understand the bounds of the claims when read in light of the specification. If the claims, read in light of the specification, reasonably apprise those skilled in the art of the scope of the invention, Section 112 demands no more. See, also, In re Merat, 519 F.2d 1390, 1396, 186 USPQ 471, 476 (CCPA 1975), which stated that the question under Section 112, second paragraph is whether the claim language, when read by a person of ordinary skill in the art in light of the specification, describes the

subject matter with sufficient precision that the bounds of the claimed subject matter are distinct. See, also, In re Warmerdam, 33 F3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). Moreover, this claims recites “substantially.” Use of that term in a claim does not render the claim indefinite if the specification provides a standard whereby one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification, Seattle Box Co., Inc. v. Industrial Coating and packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 573-4 (Fed. Cir. 1984).

The second paragraph of 35 U.S.C. § 112 requires claims to be set out and circumscribe a particular area with a reasonable degree of precision and particularity, In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977).

Applicants respectfully submit that the claims, as amended, fully comply with 35 U.S.C. § 112, second paragraph as they stand and because one of ordinary skill in the art can readily determine the metes and bounds of the invention.

Reconsideration and withdrawal of this objection is respectfully requested.

Rejection Under 35 U.S.C. § 102

Claims 1 and 4-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 3,872,694 to Sikamori et al. (“Sikamori”). This rejection is respectfully traversed.

A complete discussion of the Examiner’s rejection is set forth in the Office Action, and is not being repeated here.

A prior art reference anticipates the subject matter of a claim when that reference discloses every feature of the claimed invention, either explicitly or inherently. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed Cir. 1997). While, of course, it is possible that it is inherent in the operation of the prior art device that a particular element operates as theorized by the Examiner, inherency may not be established by probabilities or possibilities. What is inherent, must necessarily be disclosed. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) and In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

During patent examination the PTO bears the initial burden of presenting a prima facie case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

If the PTO fails to meet this burden, then the Applicant is entitled to the patent. However, when a prima facie case is made, the burden shifts to the Applicant to come forward with evidence and/or argument supporting patentability. Patentability *vel non* is then determined on the entirety of the record, by a preponderance of evidence and weight of argument, *Id.*

Moreover, as stated in MPEP § 707.07(d), where a claim is refused for any reason relating to the merits thereof it should be "rejected" *and the ground of rejection fully and clearly stated.*

Additionally, findings of fact and conclusions of law by the USPTO must be made in accordance with the Administrative Procedure Act, 5 U.S.C. § 706(A), (E) (1994). *Zurko v. Dickinson*, 527 U.S. 150, 158, 119 S.Ct. 1816, 1821, 50 USPQ2d 1930, 1934 (1999).

A claim limitation is inherent in the prior art if it is necessarily present in the prior art, not merely probably or possibly present. *Rosco v. Mirro Lite*, 304 F.3d 1373, 1380, 64 USPQ2d 1676 (Fed. Cir. 2002). The dispositive question regarding anticipation is whether one skilled in the art would reasonably understand or infer from the prior reference's teaching that every claim feature or limitation was disclosed in that single reference, *Dayco Products, Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368, 66 USPQ2d 1801 (Fed. Cir. 2003).

Sikamori does not anticipate original claims 1 and 4-6 because Sikamori only discloses that “. . . the rotational speed of the drying basket [is] selected in two high and low modes in accordance to the kind of cloths and articles to be washed, respectively” (col. 2, lines 1-4). Sikamori clearly does not explicitly or inherently (i.e., necessarily) disclose that the dehydration speed is set on the basis of the “amount” of laundry put into the washing machine. The disclosed “kind of cloths and articles to be washed” is simply not the same as an “amount of laundry put into the washing machine,” as claimed.

Additionally, Sikamori clearly does not disclose or suggest the subject matter recited in amended claim 1. As amended, claim 1 positively recites a method for controlling a dehydration speed of a washing machine with a drum driven by an induction motor having a number of poles and a voltage phase control circuit, comprising the steps of setting dehydration drum rotation speed; establishing a range of the set dehydration drum rotation speeds including the set

dehydration speed and at least one different dehydration speed; changing a number of poles of the motor according to the established range of the set dehydration speed; calculating motor torque-speed curves for multiple dehydration speeds in the established range; and controlling a rotation speed of the motor of the washing machine for the amount of laundry in the washing machine by controlling the phase of the motor voltage phase control circuit in accordance with the performance evaluating torque-speed curves.

Accordingly, the Office Action does not make out a *prima facie* case of anticipation of the claimed invention by Sikamori.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 1, 3, 4 and 6 stand rejected under 35 U.S.C. § 102(b) as being unpatentable by Shunichi et al. (Japanese Patent Publication No. 2000-014974), hereinafter, "Shunichi". This rejection is respectfully traversed.

Shunichi clearly does not disclose or suggest the subject matter recited in amended claim 1. As amended, claim 1 positively recites a combination of features, with respect to which Shunichi fails to disclose or suggest establishing a range of the set dehydration drum rotation speeds including the set dehydration speed and at least one different dehydration speed; changing a number of poles of the motor according to the established range of the set dehydration speed; calculating motor torque-speed curves for multiple dehydration speeds in the established range; and controlling a rotation speed of the motor of the washing machine for the amount of laundry

in the washing machine by controlling the phase of the motor voltage phase control circuit in accordance with the performance evaluating torque-speed curves.

Accordingly, the Office Action does not make out a *prima facie* case of anticipation of the claimed invention by Shunichi.

Reconsideration and withdrawal of this rejection are respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 2 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shunichi in view of GB 1169059 to Raworth et al. ("Raworth"). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Because the rejection is based on 35 U.S.C. § 103, what is in issue in such a rejection is "the invention as a whole, "not just a few features of the claimed invention. Under 35 U.S.C. § 103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The determination under §103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the invention must be considered as a whole and the claims must be

considered in their entirety. See Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 1567, 220 USPQ 97, 101 (Fed. Cir. 1983).

In rejecting claims under 35 U.S.C. § 103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. E-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ

580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Moreover, it is well settled that the Office must provide objective evidence of the basis used in a prior art rejection. A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Furthermore, during patent examination, the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the Applicant is entitled to the patent. Only when a *prima facie* case is made, the burden shifts to the Applicant to come forward to rebut such a case.

The invention is traversed as moot with respect to claim 2, which has been canceled.

Shunichi does not disclose or suggest the invention recited in amended claim 1, as pointed out above. For example, Shunichi fails to disclose a number of the positively recited

features of claim 1, from which claim 8 depends, including establishing a range of the set dehydration drum rotation speeds including the set dehydration speed and at least one different dehydration speed; changing a number of poles of the motor according to the established range of the set dehydration speed; calculating motor torque-speed curves for multiple dehydration speeds in the established range; and controlling a rotation speed of the motor of the washing machine for the amount of laundry in the washing machine by controlling the phase of the motor voltage phase control circuit in accordance with the performance evaluating torque-speed curves.

Raworth fails to disclose this combination of features, either, even if one of ordinary skill in the art were properly motivated to modify Shunichi in view of Raworth, the resulting modified version of Shunichi would not render the claimed invention obvious.

Accordingly, the Office Action does not make out a *prima facie* case of obviousness of the claimed invention.

Claims 7, 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shunichi in view of JP 06-312085 to Yamagishi. This rejection is respectfully traversed.

This rejection is traversed as moot because claims 7, 9 and 10 have been canceled.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 11, 13, 14 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shunichi in view of JP 62-182291 to Yoshitaka. This rejection is respectfully traversed.

Initially, this rejection is traversed as moot with respect to claims 11, 13 and 14, which have been canceled.

Shunichi does not disclose or suggest the invention recited in amended claim 1, from which claim 16 depends, for reasons pointed out above. For example, Shunichi fails to disclose a number of the positively recited features of claim 1, from which claim 16 depends, including establishing a range of the set dehydration drum rotation speeds including the set dehydration speed and at least one different dehydration speed; changing a number of poles of the motor according to the established range of the set dehydration speed; calculating motor torque-speed curves for multiple dehydration speeds in the established range; and controlling a rotation speed of the motor of the washing machine for the amount of laundry in the washing machine by controlling the phase of the motor voltage phase control circuit in accordance with the performance evaluating torque-speed curves.

Yoshitaka discloses as speed controller for a pole change type induction motor that controls the firing angle of the energizing phase angle controller with zero crossing point of an energizing current to control an energizing voltage to the motor.

Applicants respectfully submit that even if one of ordinary skill in the art were properly motivated to modify Shunichi as suggested, i.e., to provide Shunichi with a triac and fire angle controlled drive circuit, the resulting modified version of Shunichi would still not disclose or suggest the claimed invention, which includes establishing a range of the set dehydration drum rotation speeds including the set dehydration speed and at least one different dehydration speed; changing a number of poles of the motor according to the established range of the set dehydration

speed; calculating motor torque-speed curves for multiple dehydration speeds in the established range; and controlling a rotation speed of the motor of the washing machine for the amount of laundry in the washing machine by controlling the phase of the motor voltage phase control circuit in accordance with the performance evaluating torque-speed curves.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 12 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shunichi in view of Yoshitaka and Yamashita. This rejection is respectfully traversed.

This rejection is traversed as moot because claims 15 and 15 have been canceled.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 17-20

Claims 17-20 are added. Support for these amendments is found in Applicants' originally filed disclosure including, for example, from page 6, line 2 through page 9, line 24. These claims are patentable over the applied art at least because they depend from claim 1, which patentably defines over the applied art at least for reasons set forth above. In addition, these claims recite further features which are not disclosed or made obvious by the applied prior art references.

Additional Cited References

Because the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46, 472, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

Application No.: 10/755,472
Art Unit: 1746

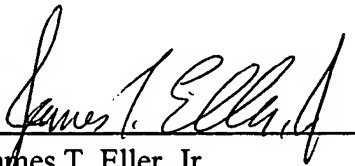
Attorney Docket No.: 0630-1927P
Reply to Office Action dated February 5, 2007
Page 21

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Date: **June 5, 2007**

Respectfully submitted,

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Attachment: Abstract of the Disclosure